

**PERSONAL COMPUTER OPERATION LEARNING REPRODUCTION
SYSTEM**

[パソコン操作学習再現システム]

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(57) [Abstract]

[Objective]

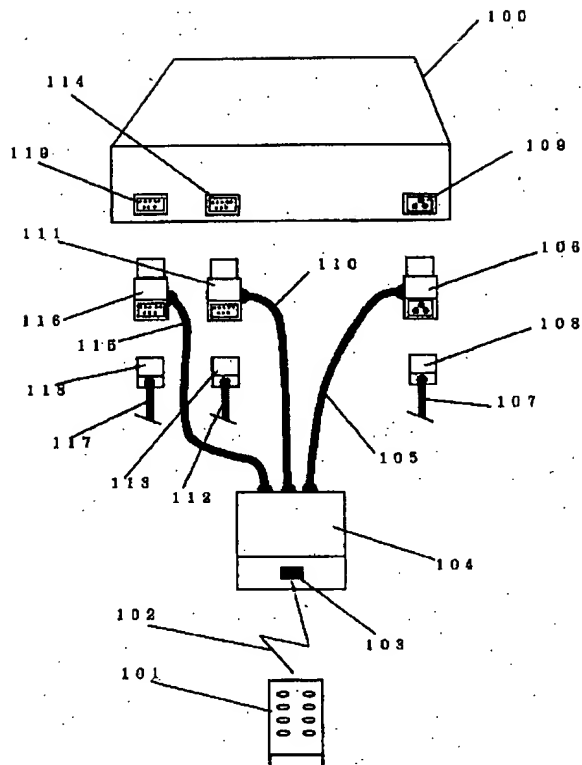
learning doing consecutive mouse and key operation, at time of starting or ending personal computer reproduction automatic system, which is done

[Constitution]

With time passage data learning doing signal data of keyboard and mouse which are operated when starting or ending personal computer 100, automatic system, which provides personal computer operating signal learning/reproduction means 104 which you remember, drives personal computer 100 on the basis of aforementioned operation data which reproduction is done with the reproduction order key operation

[Effect(s)]

If expert learning does even with beginner, in screen which is made objective with one touch arrival possibility.
simple operation each time of being repeated can be automated.



[Claim(s)]

[Claim 1]

Corresponding to content of learning start order key operation and personal computer treatment, after setting this system to learning mode with operation of the process content designated key which it sets, it occurs with consecutive key operation and mouse operation of doing attendant upon predetermined personal computer treatment distance, With time passage learning doing personal computer operating signal data of plural in automatic, means, learning which you remember after doing, with process content designated key operation, learning doing, following aforementioned personal computer operation data which storage it does to time passage, regeneration doing, it inputs into personal computer control circuit section, executes consecutive personal computer treatment in the automatic personal computer operation learning reproduction system, which is made feature

[Claim 2]

With operation reproduction order key operation of remote control operating panel, selecting personal computer operation data, regeneration it does, selectively executes personal computer treatment personal computer operation learning reproduction system, of Claim 1 statement which is made feature

[Claim 3]

Corresponding to position coordinate of mouse, and key which selects click signal storage it does, ON it does key which is selected, regeneration doing position coordinate data and click signal of mouse with, it inputs into personal computer control circuit, drives personal computer Claim 1 which is made feature or personal computer operation learning reproduction system, which is stated binary

[Description of the Invention]

[0001]

[Technological Field of Invention]

This invention with automated operation system of personal computer, is something regarding automated operation system which possesses especially learning function.

[0002]

[Prior Art And Problems To Be Solved By The Invention]

Until recently, as for operation and connection operation or other consecutive operation to personal computer communication it was necessary to repeat the same operation every time with keyboard and mouse starting personal computer (Start-up) and in case of end (Standing lowering).

resistance occurred in relation to personal computer for unaccustomed person in the personal computer, as for those being troublesome for person who is accustomed, being something which you want to abbreviate, had become cause which generates allergy in relation to keyboard and personal computer.

When starting where it registers personal computer operation command of the option to function/ key of keyboard as means which abbreviates these jobs, it registers means and various program which input command signal which is registered with key operation of function/ key into personal computer control circuit section as startup program, ON it does power source of personal computer, means etc which starts those program in automatic is executed.

Therefore, making use of these means, at time of start-up and standing lowering of personal computer, consecutive key operation and mouse operation being necessary, it abbreviates those all, There was not a means which arrives and after necessary consecutive operation a means etc which designates power source of personal computer as the OFF to personal computer screen which makes objective with only order key of 1 time.

[0003]

Furthermore, after starting personal computer of for example general-purpose type, starting program of personal computer communication, until it arrives in screen which it makes key input and objective of ID number entering the personal computer communications network, there was not a consecutive key operation and a means etc which operates mouse in all automatic.

When trying to make those automatic do as for setting, arrangement and various set condition etc of icon differ in every personal computer of user, it is difficult in beginner, for expert troublesome ones.

[0004]

[Problems That Invention Seeks to Solve] this invention does, aforementioned way being something which is formed in order to exclude deficiency, learning doing consecutive personal computer operation with simple learning order operation, at time of the start-up and standing lowering of aforementioned personal computer, the storage sequential regeneration does consecutive personal computer operation learning of doing attendant upon time passage with one key operation (key operation of 1 time) of key which learning is done, As aforementioned personal computer operation is simplified by executing in the automatic, those setting it is something which offers practical system easily even with beginner.

[0005]

[means in order to solve problem] Corresponding to content of learning start order key operation and personal computer treatment regarding personal computer operation learning reproduction system in this invention because of that, after setting this system to learning mode with operation of the process content designated key which it sets,

Driving personal computer, it occurs with consecutive key operation and mouse operation where you can do attendant upon predetermined personal computer treatment distance which it does, with time passage learning doing personal computer operating signal data of plural in automatic, after possesses means which you remember, learning doing, with one key operation of process content designated key, learning doing, following personal computer operation data which storage it does to time passage, regeneration doing, it is something which constructs personal computer operation learning reproduction system which it inputs into personal computer control circuit section, executes consecutive personal computer drive in automatic.

[0006]

In addition, regarding personal computer operation learning reproduction system of this invention, making use of remote control operating panel, concerning keyboard and mouse of personal computer, various personal computer operations of showing on description above practical system it is construction possible fully automatic.

In addition, also system which uses function key of personal computer in place of remote control operating panel being construction possible, it utilizes unaccustomed person personal computer in keyboard by pasting label etc which shows process content in key, assist.

[0007]

This way, corresponding to various setting status and equipment configuration of the personal computer which differs every user, regarding personal computer operation learning reproduction system of this invention, learning doing mouse signal and keyboard signal which are standardized storage/ regeneration it does, it is something which personal computer operation greatly is simplified.

[0008]

[Embodiment of the Invention]

Next referring to drawing, you explain form of execution of the this invention in detail.

As for Figure 1 with external view which shows externally viewed configuration which is a morphological form of one Working Example of this invention, As for Figure 2 as for block diagram, Figure 3 which shows circuit constitution as for the block diagram, Figure 4 which shows details of portion of circuit constitution as for block diagram, Figure 5 which shows circuit constitution of insertion socket section as for flowchart, Figure 6 of learning distance which shows operation of this invention Working Example flowchart, Figure 7 of the automated operation distance which shows operation of this invention Working Example is block diagram which shows circuit constitution of other Working Example of this invention.

[0009]

In Figure 1, 100 with personal computer (personal computer), abbreviated illustration, but the display and keyboard, mouse etc are possessed.

101 with remote control operating panel, operates personal computer 100 through infrared light 102, remote control.

As for 104 with personal computer operation learning regeneration device which even main body of the this invention can be said, with infrared light receiving section 103 receiving key operation order signal with infrared light from remote control table, learning doing personal computer operating signal and the storage doing, regeneration doing personal computer operating signal at time of regeneration and imparting doing in personal computer driving personal computer in automatic, to the state which it sets beforehand, They are (End) ones where you start personal computer and or stand and lower.

106 with insertion socket for power source which builds in switch which controls ON/OFF of power source, is inserted in power source socket 109 of the personal computer, and between power source socket 108 of power source cable 107 through power source control signal cable 105, from the personal computer operation learning regeneration

device 104 ON/OFF does power source of personal computer with the control signal which imparting is done.

As 111 with insertion socket for keyboard, is inserted in the keyboard socket 113 of keyboard signal cable 112 which bundles signal line of plural which is connected to keyboard and between keyboard socket 114 of personal computer through the keyboard signal cable 110 which bundles signal line of plural inputs keyboard operation signal into personal computer operation learning regeneration device 104, keyboard operation playback signal which is outputted from personal computer operation learning regeneration device 104 is inputted into keyboard socket 114 of personal computer.

As 116 with insertion socket for mouse, is inserted in the mouse socket 118 of mouse signal cable 117 which bundles signal line of plural which is connected to mouse and between mouse socket 119 of personal computer through the mouse signal cable 115 which bundles signal line of plural inputs mouse operating signal into the personal computer operation learning regeneration device 104, mouse operation playback signal which is outputted from personal computer operation learning regeneration device 104 is inputted into mouse socket 119 of personal computer.

[0010]

Next, in Figure 2, as for 200 with computer circuit which is provided in the internal of personal computer 100, through power source line 203 from power source socket 109, as electric power is supplied, through keyboard signal line 201 from keyboard socket 114, keyboard signal is inputted, through mouse signal line 202 from mouse socket 119, mouse signal is inputted.

204 with keyboard, outputs keyboard signal, through keyboard signal cable 112 and the insertion socket 111, keyboard socket 114 for keyboard socket 113, keyboard, inputs keyboard operation signal into personal computer circuit 200.

205 with mouse, outputs mouse signal, through mouse signal cable 117 and the insertion socket 116, mouse socket 119 for mouse socket 118, mouse, inputs mouse operating signal into personal computer circuit 200.

Furthermore, with one chip microcomputer which is provided in operating signal storage regeneration device 104, keyboard operation signal data and mouse operating signal data, power source operating signal data etc with each operation timing/ data storage/ regeneration it does 206.

With key code signal line from remote control operating panel 101 which is received with infrared light receiving section 103, the key code signal regeneration it does 207 with key code signal regeneration circuit 208, through remote control/ key signal line 209, it has inputted into one chip microcomputer 206.

[0011]

Next, as for 300 with ALU which executes program which controls operation of this invention Working Example, as for 301 as for ROM, 302 which program storage has been done as for regeneration program data signal line, 303 operating signal entrance/ output is controlled with I/O interface part in Figure 3.

As for 304 as for operation data signal line, 305 as for RAM, 306 which keyboard operation signal and key code data of mouse operating signal, power source operating signal and timing data etc which operated those recording and reproduction is done control signal line of RAM305, as for 307 the control signal line of I/O interface 303, as for 308 through timing data line 309 to the ALU300 with timer, timing data is supplied, 310 supplies program count data 311 to ROM 301 with program counter.

[0012]

Next, 400 with insertion socket 111 or internal wiring of 116, through the connector terminal 401 and 403, as socket 113 for keyboard or connector terminal 402 of 118 and the socket 114 of personal computer or connector terminal 404 of 119 are connected, connecting cable 110 of 1 chip microcomputer 206 or is connected to 115 in Figure 4.

[0013]

Next, it consists learning completion or other distance of learning bureaucratic key ON, 522 of mouse position setting of power source key operation, 509 of register start key ON, of 501 and key ON, 505 and 507 where 503 registers, personal computer operation of the mouse click, 512 of 510, personal computer operation and 516 and 518 power source key operation, 520 of key operation, 515 of keyboard of 513 in flow chart 5 of learning distance, as operation content of operation side.

In addition, as though it illustrates with flowchart, corresponding to operation content of operation side, as for learning distance of learning equipment side, start of operation time interval measurement of 502, It consists key operation storage and key code storage and operation time interval storage, 517 of the key code storage, 506 of register order key of 504 and mouse position coordinate storage and click operation storage and operation time interval storage, 514 of power source ON key operation storage, 511 of 508 and the learning completion key ON key code storage of power source OFF key operation storage, 521 of 519 and learning completion storage or other distance of operation time interval storage 523.

[0014]

Next, personal computer operation learning of doing beforehand regeneration it does Figure 6, with flowchart when personal computer is driven in automatic, with key ON operation distance 601 which shows job name which is provided in the remote control operating panel, automated operation is started, at time of learning and timer in order to take synchronization starts with operation spacing timer start of the distance 602.

As for 603 when with power source ON playback signal distinction distance, power source ON signal is "It is", power source ON distance of distance 604 is executed and designates power source of the personal computer as ON.

When with distance which is distinguished whether regeneration data, the key data of mouse data or keyboard, it is a mouse signal, with distance 606 the mouse one coordinate signal regeneration it does 605 after specified time, with click signal inputs into a personal computer and personal computer of distance 607 operates.

After that, if it decides presence or absence of power source OFF signal with distance 610 and is not it returns to distance 605, repeats same distance.

On one hand, in distance 605, case of key signal with distance 608 the regeneration doing key signal after specified time, occurring, distance which operates is executed personal computer of 609.

distance 610 decides presence or absence of power source OFF playback signal, in case of "none " returning to distance 605, regeneration distance of key signal after specified time is changed repeated.

When with distance 610, power source OFF signal is "It is", power source OFF of personal computer is executed by distance 611.

After that, end signal regeneration is done by distance 612, automatic job ends with distance 613.

[0015]

Next, as for Figure 7 with other Working Example when operating signal storage regeneration means is provided inside personal computer main body, as for 100 as for personal computer, 102 as for infrared light, 103 as for infrared light receiving section, 105 power source control signal line, As for 109 as for power source socket, 108 as for socket, 112 of power source cable 207 as for the keyboard signal cable, 113 as for keyboard socket, 114 as for keyboard socket, 117 of personal computer as for mouse signal cable, 118 as for mouse socket, 119 as for mouse socket, 201 as for keyboard signal line, 200 as for computer circuit, 202 as for mouse signal line, 204 as for keyboard, 205 as for mouse, 206 as for 1 chip microcomputer, 208 which it forms as operating signal storage regeneration circuit as for key signal regeneration circuit, 209 as for remote control key signal line, 700 with power source switch which is provided inside personal computer main body 100, electric power which under control of power source ON/OFF signal 701 from power source socket 109 is supplied to computer circuit 200 ON/OFF is done.

[0016]

Regarding this working example, you expressed operating signal storage regeneration means in regard to means which is provided in outside of computer circuit inside personal computer, but building in operating signal storage regeneration program which function which inside computer circuit is shown with Figure 5 and Figure 6 to program is converted, storage/ regeneration doing the operating signal storage regeneration data in memory inside computer circuit, also means which executes the function of this invention is practical in same way.

[0017]

[Effect of Invention]

According to personal computer operation learning reproduction system of this invention, each time similar operation to case of starting and stopping personal computer repeatedly designates consecutive key operation and mouse operation of being, as realizable with one touch, key operation of remote control operating button.

For person of personal computer allergy and as it decreases resistance, utilization of personal computer with possible, for person who is accustomed to the personal computer, troublesome key operation and mouse operation are simplified, it is something which convenience greatly is raised.)

[Brief Explanation of the Drawing(s)]

[Figure 1]

external view of this invention

[Figure 2]

circuit block diagram of this invention

[Figure 3]

circuit block diagram of part

[Figure 4]

circuit diagram of insertion socket

[Figure 5]

flow chart of learning distance

[Figure 6]

flowchart of automated operation distance

[Figure 7]

circuit block diagram of other Working Example

[Explanation of Symbols in Drawings]

personal computer

	101
remote control operating panel	
	102
infrared light	
	103
light receiving section	
	104
personal computer operation learning reproduction equipment	
	105
power source control signal cable	
	106
Insertion socket for power source	
	107
power source cable	
	108
power source socket	
	109
power source socket of personal computer	
	110
keyboard signal cable	
	111
Insertion socket for keyboard	
	112
keyboard signal cable	
	113
keyboard socket	
	114
keyboard socket of personal computer	

	115
mouse signal cable	
	116
Insertion socket for mouse	
	117
mouse signal cable	
	118
mouse socket	
	119
mouse socket of personal computer	
	200
computer circuit	
	201
keyboard signal line	
	202
mouse signal line	
	203
power source line	
	204
keyboard	
	205
mouse	
	206
one chip microcomputer	
	207
key code signal line	
	208
key code signal regeneration circuit	

	209
remote control key signal line	
	300
ALU	
	301
ROM	
	302
regeneration program data signal line	
	303
I/O interface part	
	304
Operation data signal line	
	305
RAM	
	306
control signal line	
	307
control signal line	
	308
timer	
	309
timing data line	
	310
program counter	
	311
program count data	
	400
internal wiring of insertion socket	

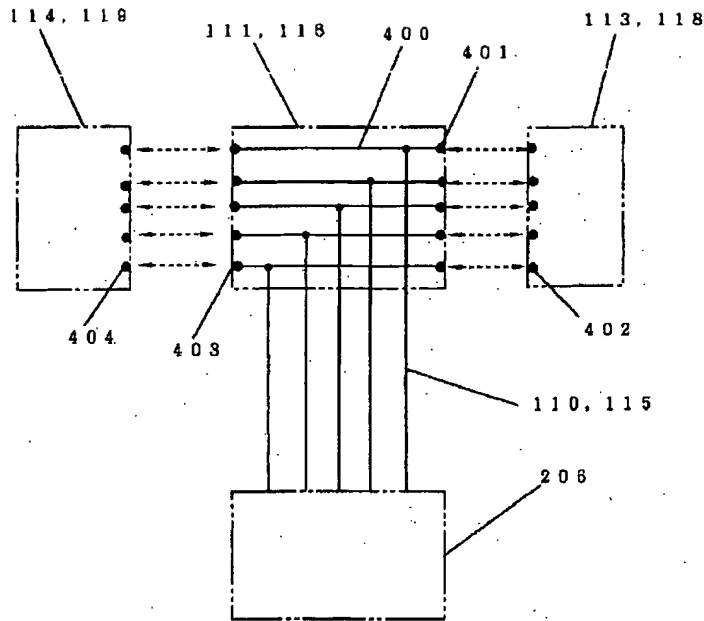
	401
connector terminal	
	402
connector terminal	
	403
connector terminal	
	404
connector terminal	
	501
Register start key ON	
	502
Start of operation time interval measurement	
	503
key ON which it registers	
	504
key code storage of order key which it registers	
	505
power source key operation	
	506
power source key operation	
	507
power source key ON	
	508
power source ON key operation storage	
	509
mouse position setting	
	510
mouse click	

	511
mouse position coordinate storage, click operation storage, operation time interval storage	
	512
personal computer operation	
	513
key operation	
	514
key operation storage, key code storage, operation time interval storage	
	515
personal computer operation	
	516
power source key operation	
	517
power source key operation	
	518
power source OFF	
	519
power source OFF key operation storage	
	520
learning completion key ON	
	521
learning completion key ON key code storage, operation time interval storage	
	522
learning completion	
	523
learning completion	
	601
Job name key ON	

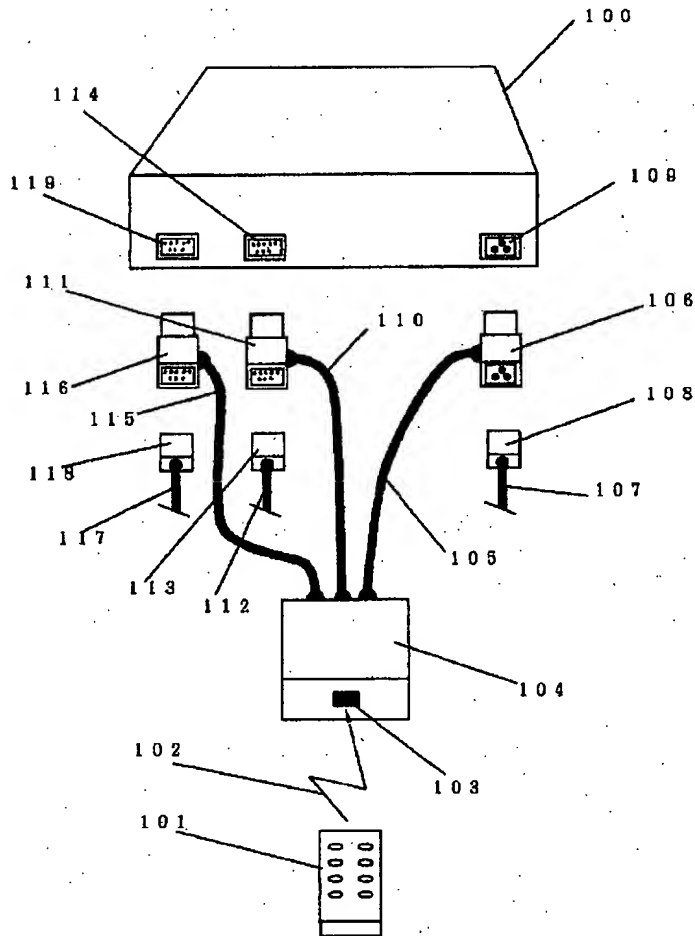
	602
Operation spacing timer start	
	603
power source ON playback signal	
	604
power source ON	
	605
signal	
	606
specified time, mouse position coordinate occurrence and click signal occurrence	
	607
personal computer operation	
	608
specified time, key signal occurrence	
	609
personal computer operation	
	610
power source OFF playback signal	
	611
power source OFF	
	612
end signal regeneration	
	613
automatic work halt	
	700
power source switch	
	701
power source ON/OFF signal	

Drawings

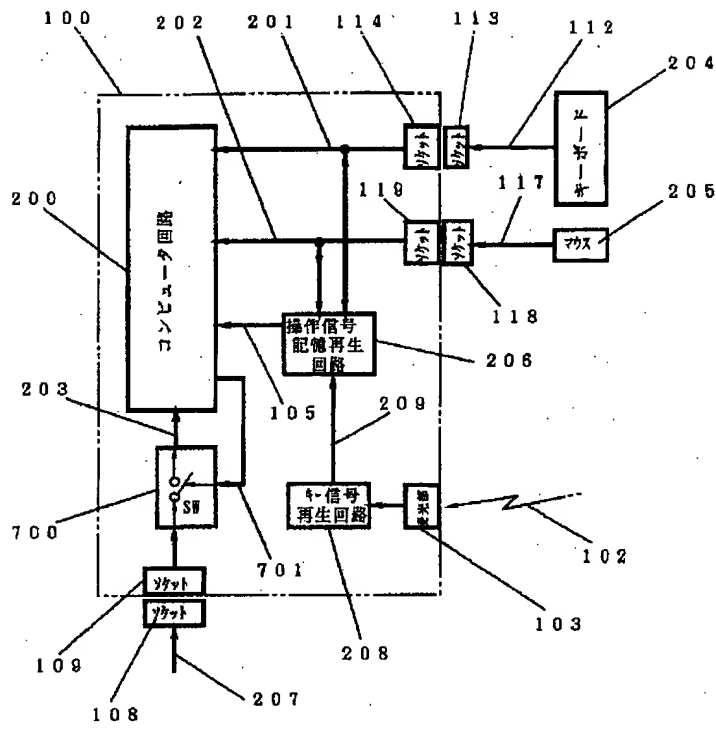
[Figure 4]



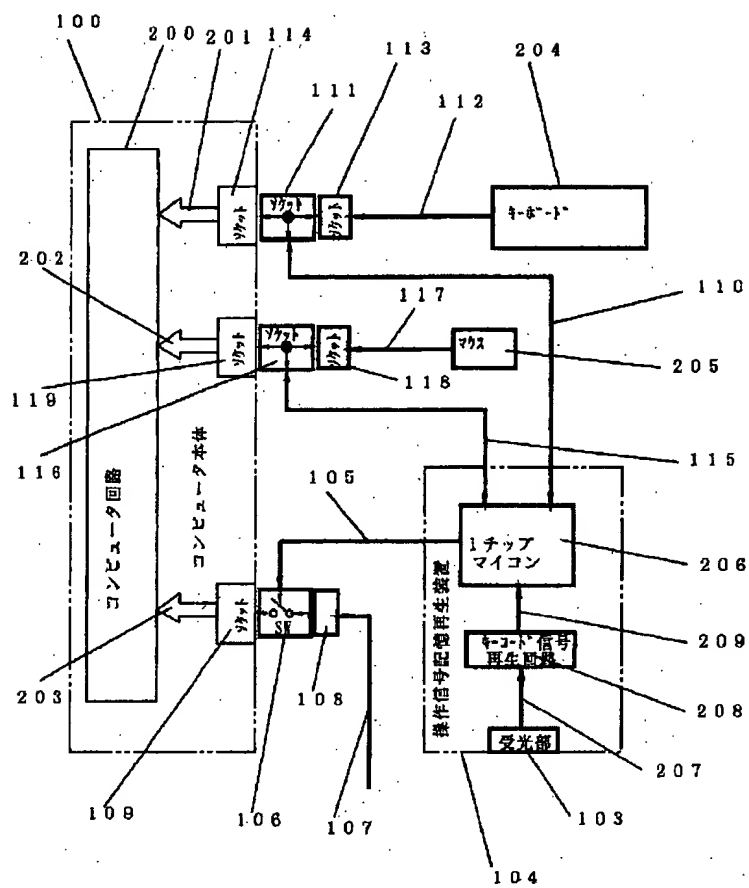
[Figure 1]



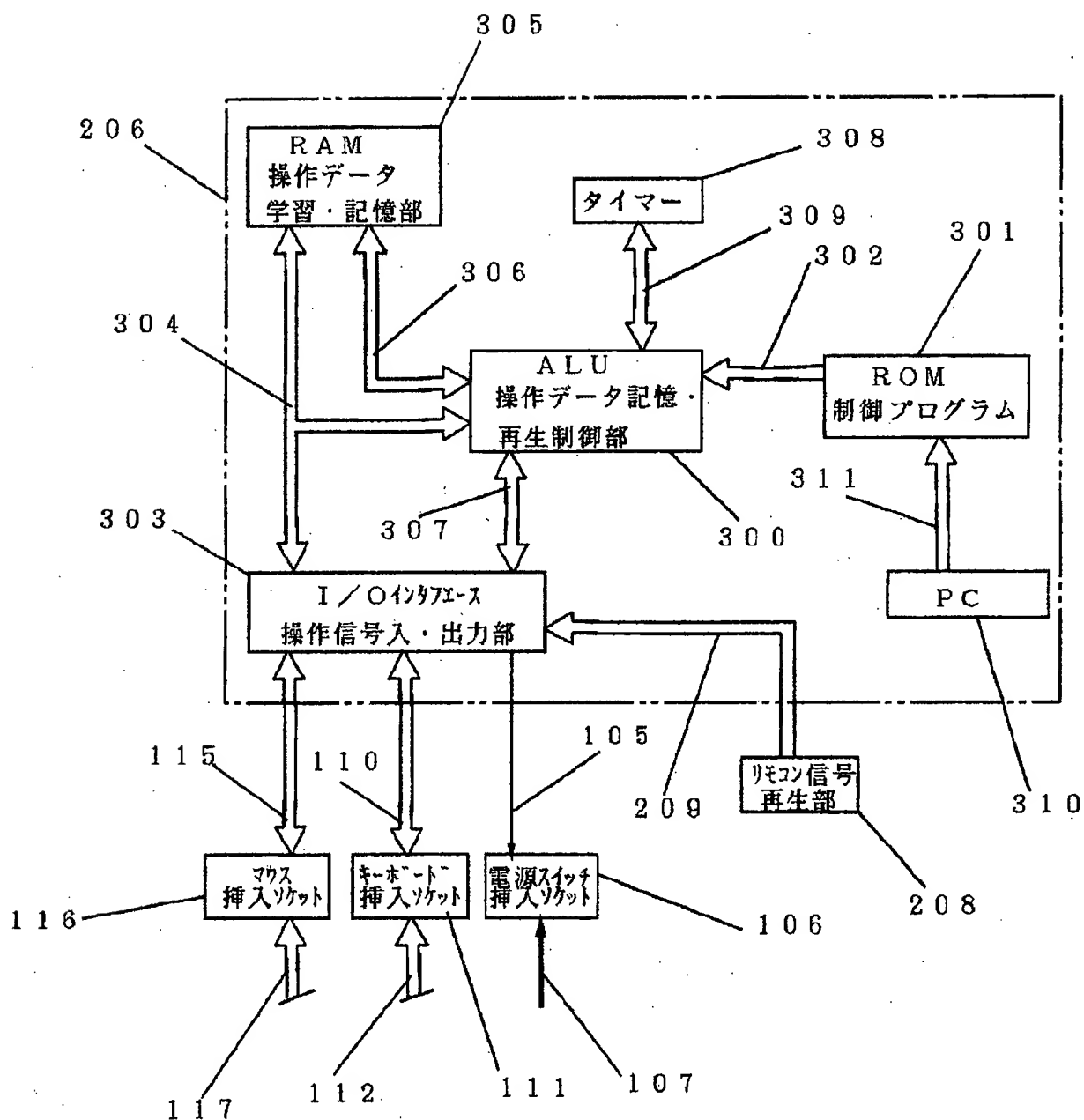
[Figure 7]



[Figure 2]



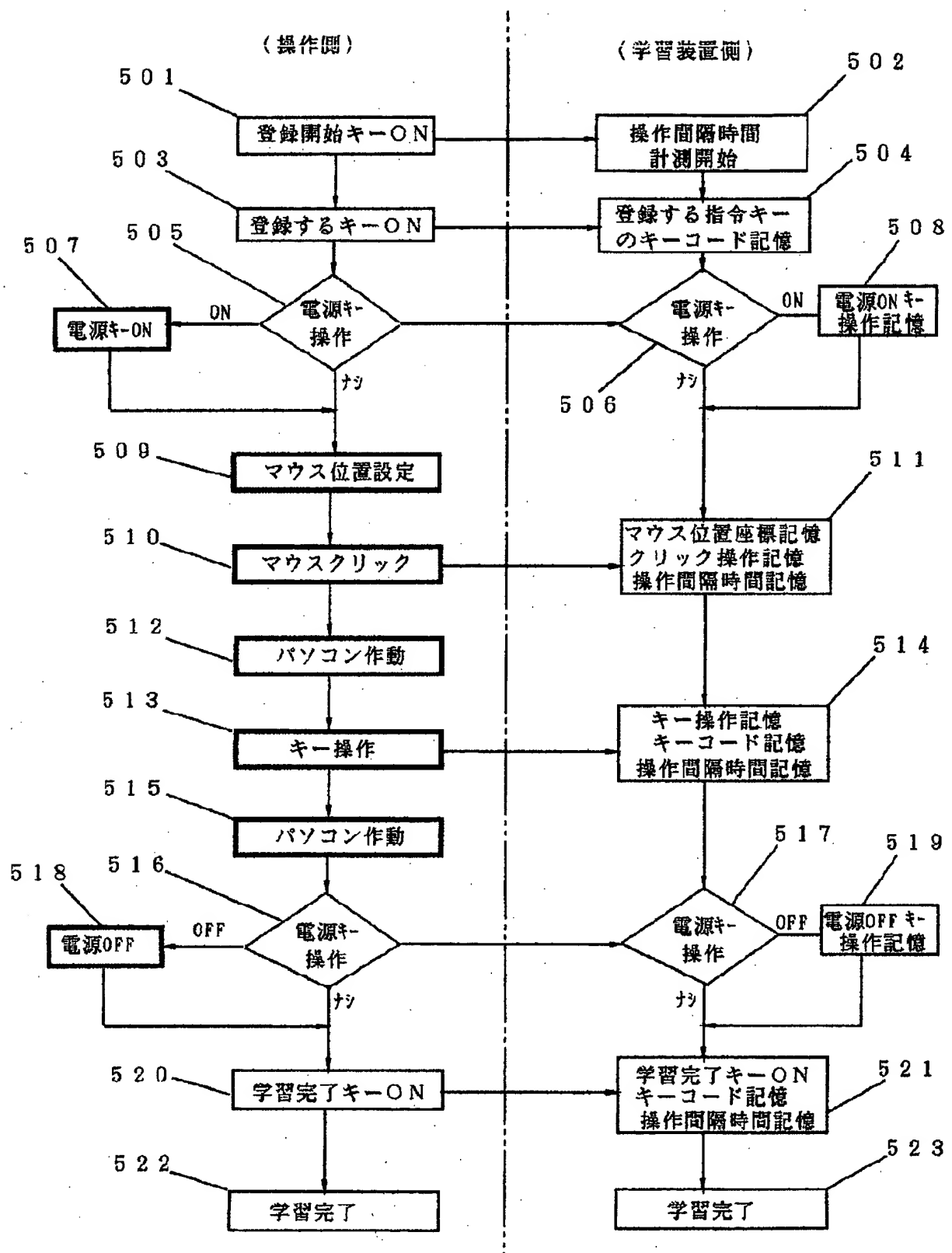
[Figure 3]



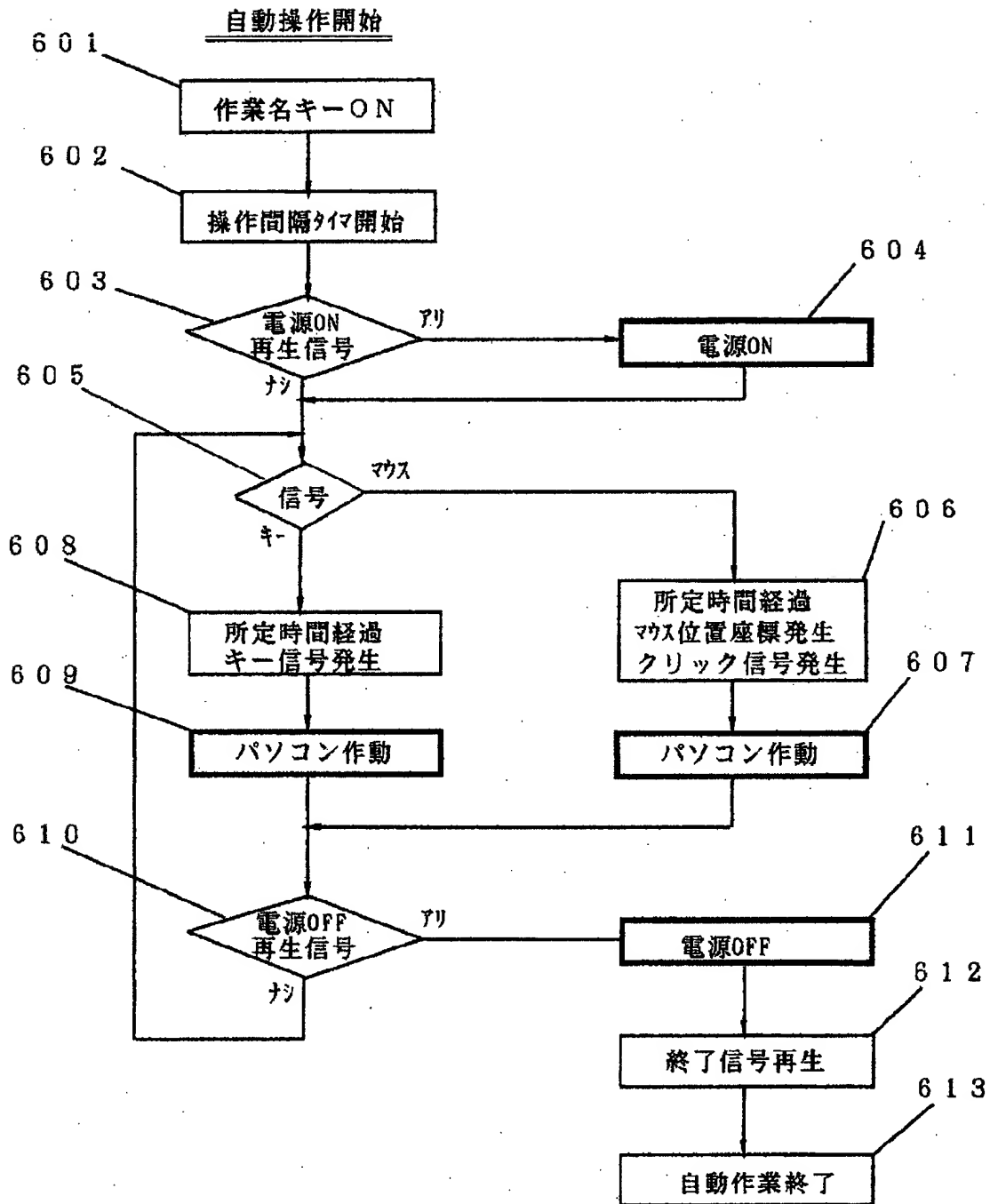
[Figure 5]

(Control side)

(Learning equipment side)



[Figure 6]



[Figure 6; Translation]

1. Start the automatic operation
2. Yes
3. No
4. Mouse
5. Key
6. Yes
7. No